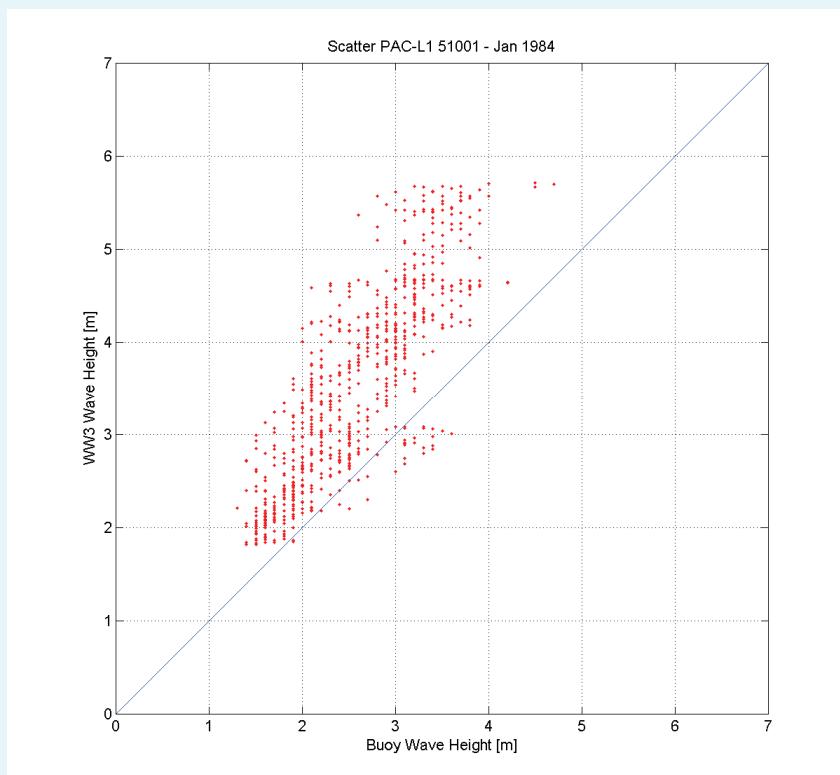
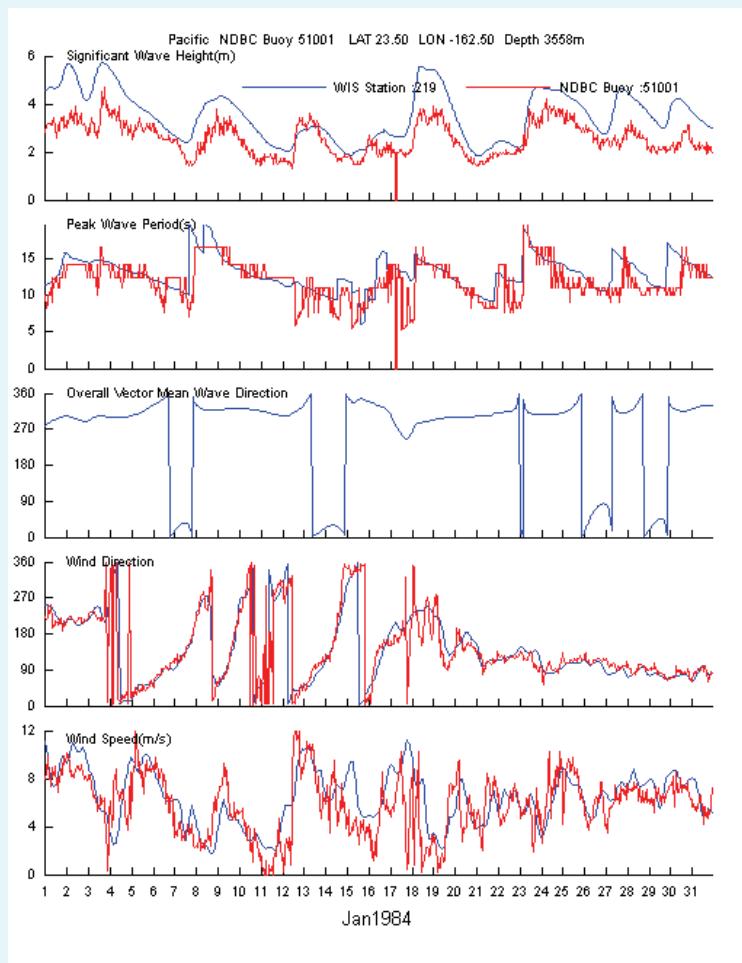


**Descriptive Examples of the Current WIS Pacific Basin Hindcast  
(Hawaii, Alaska and Offshore from Aberdeen, WA)**

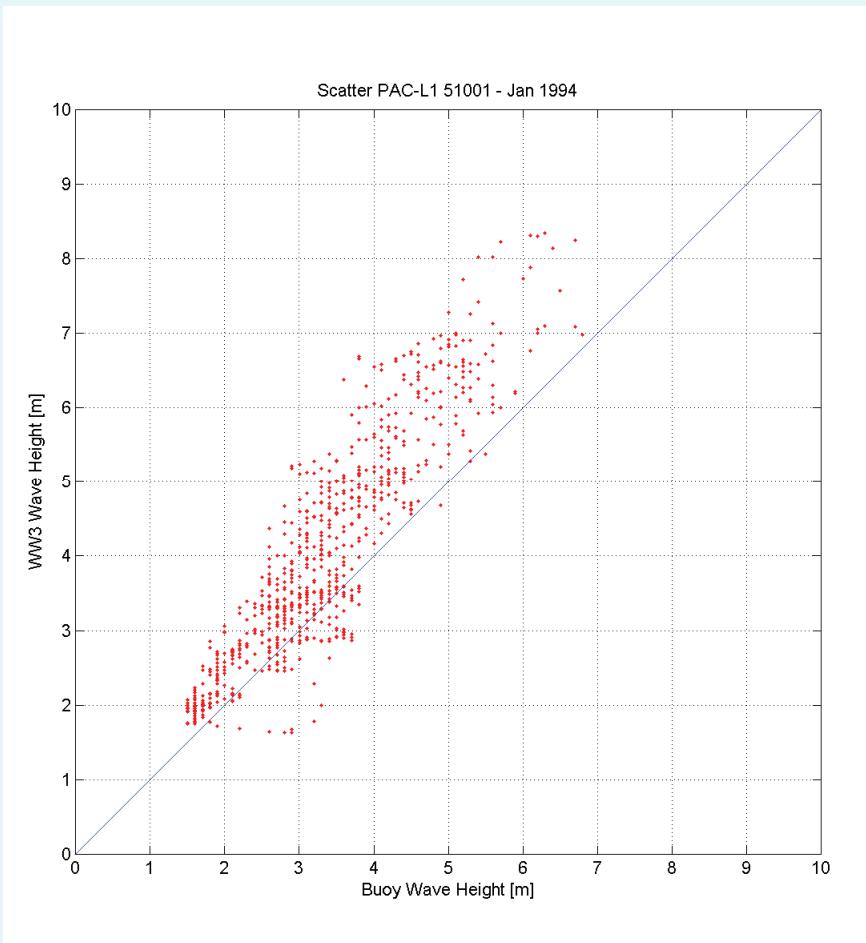
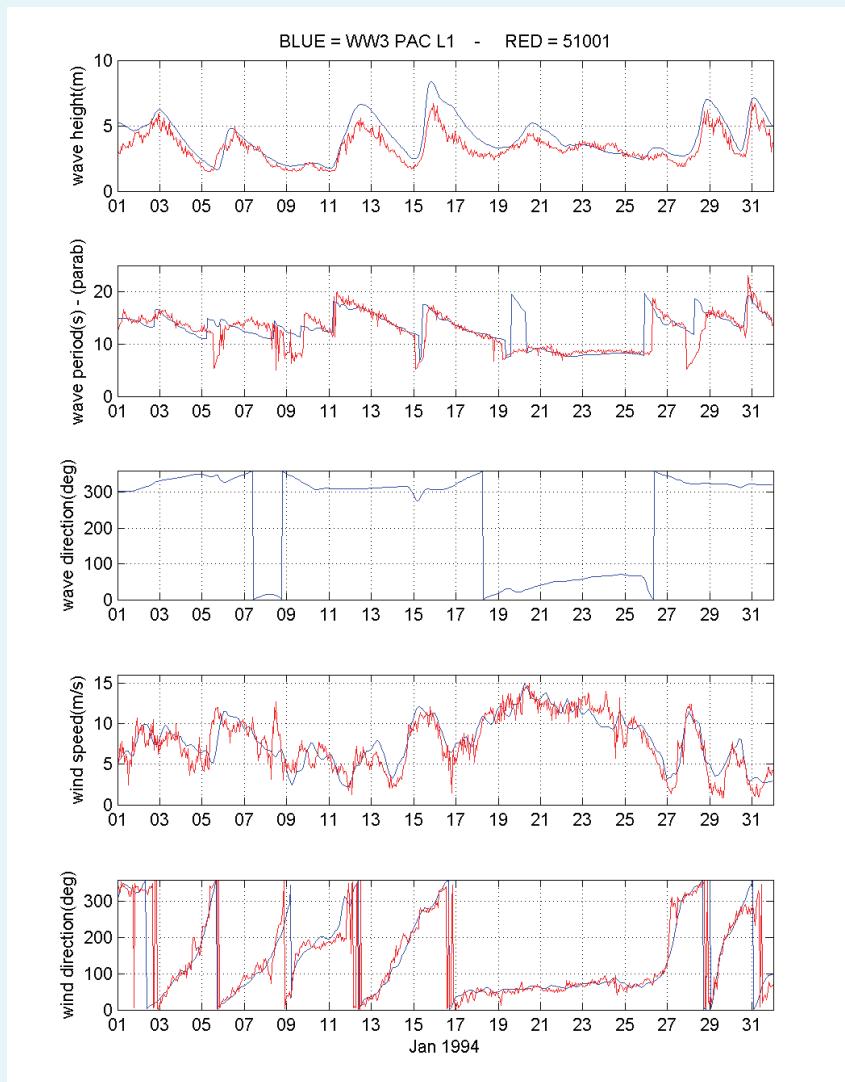
**Pacific Basin Hindcast review is continuing with analysis of  
hindcast results and review of the input wind fields.**

**Information will be added and updated as it is available.**

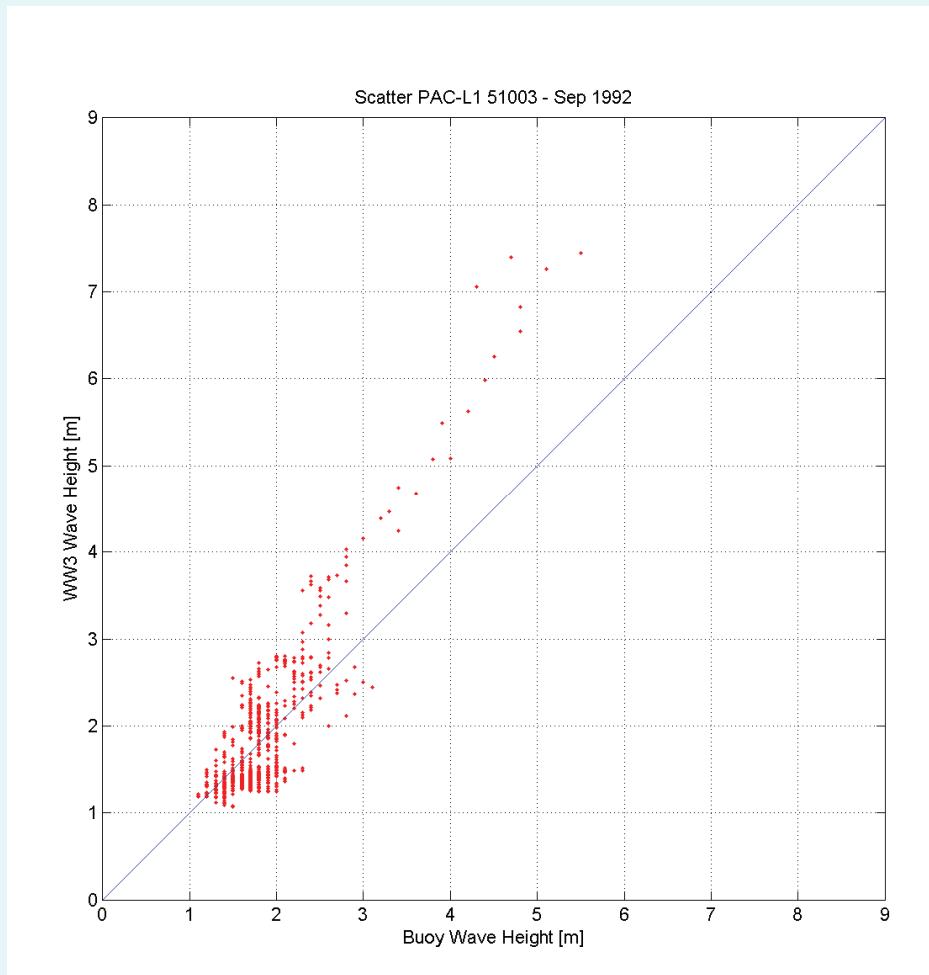
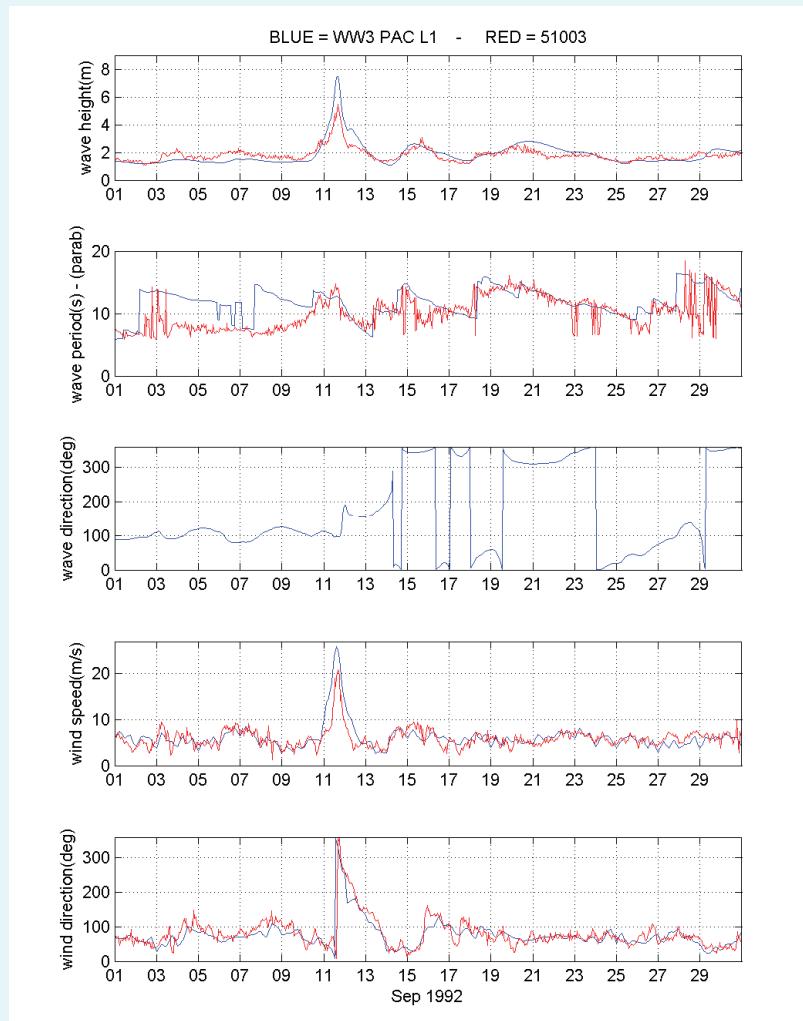
**HAWAII WINTER EXAMPLE:** The WIS over-estimation of significant wave height in the Pacific Basin hindcast is most pronounced at NDBC 51001. A January 1984 time comparison of the WIS PAC Basin hindcast results at NDBC 51001 is shown on the left below. Note that all peaks except one are over-estimated by the hindcast (blue line). The scatter plot (below, right) that plots the time-paired hindcast wave height as a function of the buoy wave height also shows the consistent over-prediction. New wind field tests are being considered. The hypothesis is that the winds from storms at and north of latitude 35-deg N have been amplified to produce excess swell wave energy.



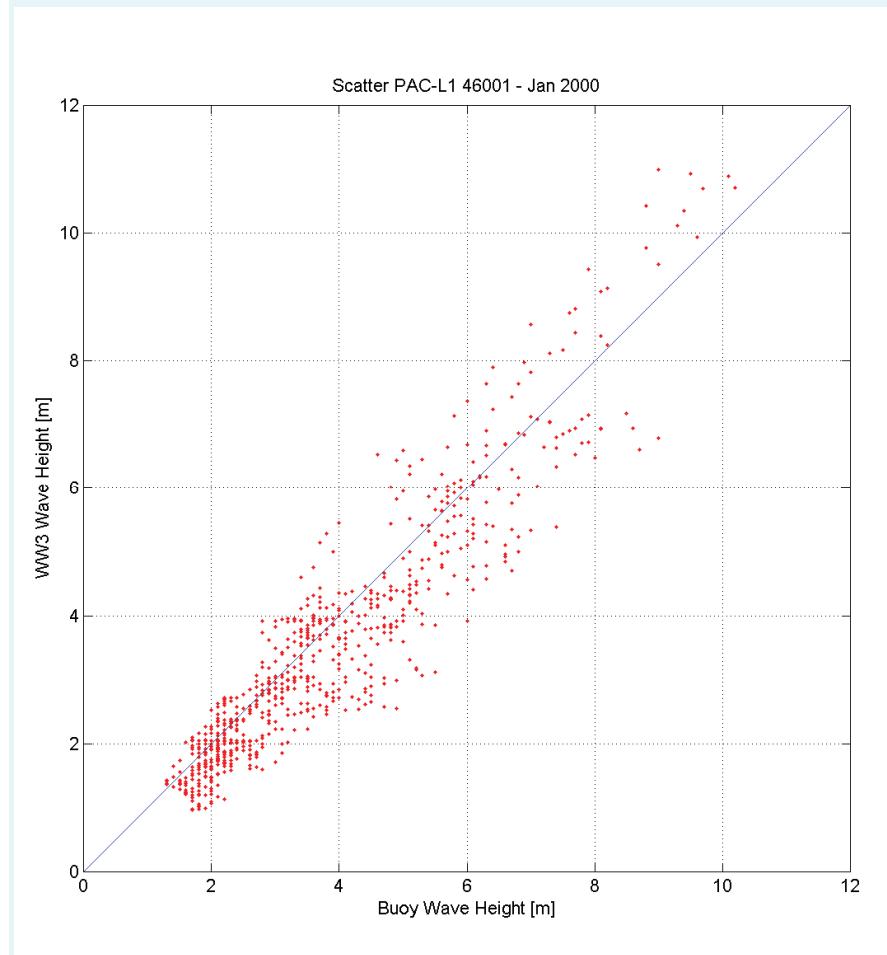
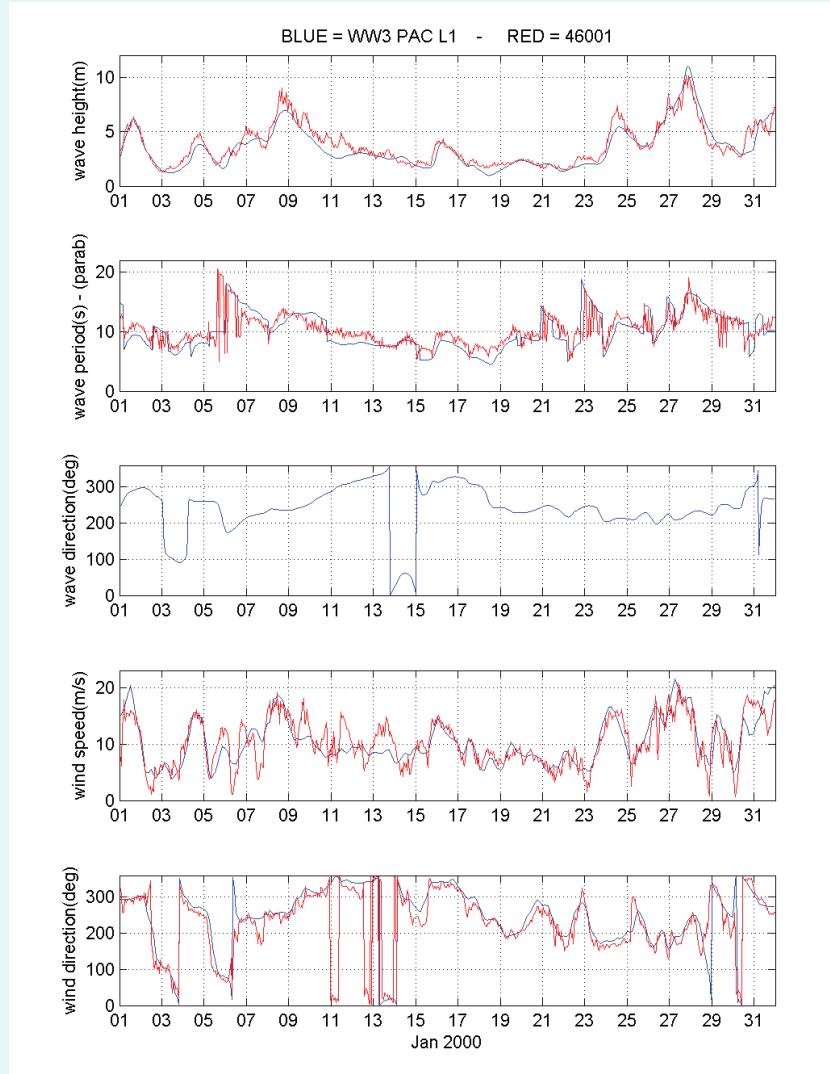
**HAWAII WINTER EXAMPLE:** An example of the WIS over-estimation of storm significant wave height in the Pacific Basin hindcast is shown below at NDBC 51001 for January 1994. The comparison of local winds at this buoy site looks good but events on January 12, 16, and 29 show over-estimation of the peak storm wave heights possibly caused by excess energy from storms resident near and north of latitude 35-deg N. The event on January 16 shows an over-estimation of 1.5m or 23%. The scatter plot (below, right) shows over-prediction for waves 4m and higher.



**HAWAII SUMMER EXAMPLE:** The time-paired plot of the hindcast information and the measured information at 51003 for September 1992 is shown to the left below. The spike in wave height shows the ocean's response to Hurricane Iniki which had a path south of this buoy location. The hindcasted wave height shows a peak that is 2m higher than the measured peak, and the wind speed shows a peak 5 m/sec higher than the measured value. The scatter plot (below, right) shows the over-prediction for the hindcasted wave heights 2.5m and higher during the month.



**ALASKA WINTER EXAMPLE:** The time comparison and wave height scatter plots shown below for the Gulf of Alaska location, NDBC 46001, for January 2000 show very good agreement between the hindcast and the measurements. Only wave heights 9m and above show over-prediction. The storm winds in this area appear to be well-represented although there are cases when the local winds are slightly higher or lower than the buoy measurements. The storm wave peaks mimic the wind conditions.



**EXAMPLE OFFSHORE US PACIFIC COAST:** The plots below show hindcast and measured results for an example month, December 2000, at NDBC 46005 west of Aberdeen, WA. The time comparison plot shows some slight over-prediction caused by excess swell coming in from the north Pacific but also shows an ~40% under-prediction for the major event of the month on December 15, 2000. The scatter plot shows that the hindcast wave heights are typically low for the waves above 6m. Winds appear to be well-represented at the buoy location but the surrounding wind fields possibly under-represent the storm.

